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ANALYTICAL ABSTRACTS

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JOURNALS

The following list contains the names of journals (and their abbreviations) from which papers ha been abstracted regularly during 1974. Journals that have been omitted are those that contain only occasional analytical paper, and a number of Russian journals from which translated abstracts have be published through the medium of *Referativnyi Zhurnal*.

The abbreviations, in italics, after the full names of the journals refer to the languages in which t journals are published.

Acta chem. fenn.	Acta Chemica Fennica [*Eng.*]
Acta chem. scand.	Acta Chemica Scandinavica [*Eng.*]
Acta chim. hung.	Acta Chimica Academiae Scientiarum Hungaricae [*Eng., Ge*
Acta pharm. hung.	Acta Pharmaceutica Hungarica [*Hung.*]
Acta pharm. jugosl.	Acta Pharmaceutica Jugoslavica [*Serbo-Croat*]
Acta pharm. suec.	Acta Pharmaceutica Suecica [*Eng.*]
Acta Pol. pharm.	Acta Poloniae Pharmaceutica [*Pol.*]
Adv. Activ. Anal.	Advances in Activation Analysis [*Eng.*]
Afinidad	Afinidad [*Span.*]
Agric. biol. Chem.	Agricultural and Biological Chemistry [Tokyo] [*Eng.*]
AMDEL Bull.	Bulletin of the Australian Mineral Development Laborator [*Eng.*]
Am. ind. Hyg. Ass. J.	American Industrial Hygiene Association Journal [*Eng.*]
Analusis	Analusis (*formerly* Chimie Analytique *and* Methodes Physiq d'Analyse) [*Fr.*]
Analyst, Lond.	Analyst [*Eng.*]
Analyt. Biochem.	Analytical Biochemistry [*Eng.*]
Analyt. Chem.	Analytical Chemistry [*Eng.*]
Analytica chim. Acta	Analytica Chimica Acta [*Eng., Fr., Ger.*]
Analyt. Lett.	Analytical Letters [*Eng., Fr., Ger.*]
An. Asoc. quim. argent.	Anales de la Asociacion Quimica Argentina [*Span.*]
An. Bromat.	Anales de Bromatologia [*Span.*]
Angew. Chem., int. Edn	Angewandte Chemie, International Edition [*Eng.*]
Angew. makromolek. Chem.	Angewandte makromolekulare Chemie [*Eng., Ger.*]
Annali Ist. sup. Sanita	Annali dell'Istituto Superiore di Sanita [*Eng., Fr., Ital.*]
Annls Falsif. Expert. chim.	Annales des Falsifications et de l'Expertise Chimique [*Fr.*
Annls pharm. fr.	Annales Pharmaceutiques Francaises [*Fr.*]
An. Quim.	Anales de Quimica de la Real Sociedad Espanola de Fisic Quimica [*Span.*]
Antibiotiki	Antibiotiki [*Russ.*]
Appl. Optics	Applied Optics [*Eng.*]
Appl. Spectrosc.	Applied Spectroscopy [*Eng.*]
Arch. EisenhuettWes.	Archiv fuer das Eisenhuettenwesen [*Ger.*]
Arch. Pharm., Berl.	Archiv der Pharmazie (und Berichte der Deutschen pharm zeutischen Gesellschaft) [*Ger.*]
Armyan. khim. Zh.	Armyanskii Khimicheskii Zhurnal [*Russ.*]
Arzneimittel-Forsch.	Arzneimittel-Forschung [*Ger.*]
Aust. J. Chem.	Australian Journal of Chemistry [*Eng.*]
Azerb. khim. Zh.	Azerbaidzhanskii Khimicheskii Zhurnal [*Russ.*]
Beitr. Tabakforsch.	Beitraege zur Tabakforschung [*Eng., Ger.*]
Biochem. J.	Biochemical Journal [*Eng.*]
Biochem. Med.	Biochemical Medicine [*Eng.*]
Biochim. biophys. Acta	Biochimica et Biophysica Acta [*Eng.*]
Biochimie	Biochimie (*formerly* Bulletin de la Societe de Chimie Biol ique) [*Eng., Fr.*]
Biomed. Mass Spectrom.	Biomedical Mass Spectrometry [*Eng.*]
Boll. Soc. ital. Biol. sper.	Bollettino della Societa Italiana di Biologia Sperimentale [*It*
Brauwissenschaft	Brauwissenschaft [*Ger.*]
Br. med. J.	British Medical Journal [*Eng.*]
Br. Steel Corp. open Rep.	British Steel Corporation Open Report [*Eng.*]
Bull. chem. Soc. Japan	Bulletin of the Chemical Society of Japan [*Eng.*]
Bull. environ. Contam. Toxic.	Bulletin of Environmental Contamination and Toxicol [*Eng.*]
Bull. Narcot.	Bulletin on Narcotics [*Eng.*]
Bull. Soc. chim. Fr.	Bulletin de la Societe Chimique de France [*Fr.*]
Can. J. Biochem.	Canadian Journal of Biochemistry [*Eng., Fr.*]
Can. J. Chem.	Canadian Journal of Chemistry [*Eng., Fr.*]
Can. J. pharm. Sci.	Canadian Journal of Pharmaceutical Science [*Eng.*]
Can. J. Spectrosc.	Canadian Journal of Spectroscopy [*Eng., Fr.*]
Cereal Chem.	Cereal Chemistry [*Eng.*]
Chemia analit.	Chemia Analityczna [*Eng., Fr., Ger., Pol., Russ.*]
Chemica Scripta	Chemica Scripta [*Eng.*]
Chemicke Listy	Chemicke Listy [*Czech*]
Chemicke Zvesti	Chemicke Zvesti [*Eng., Fr., Ger., Russ.*]

Chemicky Prum.	Chemicky Prumysl [*Czech*]
Chemiker Ztg	Chemiker Zeitung [*Ger.*]
Chemistry, Taipei	Chemistry, Taipei [*Chin.*]
Chem. pharm. Bull., Tokyo	Chemical & Pharmaceutical Bulletin [*Eng., Ger.*]
Chem. Tech., Berl.	Chemische Technik [*Ger.*]
Chemy Br.	Chemistry in Britain [*Eng.*]
Chemy Ind.	Chemistry and Industry [*Eng.*]
Chimia	Chimia [*Eng., Fr., Ger.*]
Chromatographia	Chromatographia [*Eng., Fr., Ger.*]
Chromat. Rev.	Chromatographic Reviews [*Eng.*]
Clin. Chem.	Clinical Chemistry [*Eng.*]
Clinica chim. Acta	Clinica Chimica Acta [*Eng., Fr., Ger.*]
Colln Czech. chem. Commun.	Collection of Czechoslovak Chemical Communications [*Eng., Fr., Ger., Russ.*]
C. r. Acad. bulg. Sci.	Comptes Rendus de l'Academie Bulgare des Sciences [*Eng., Fr., Ger.*]
CRC crit. Rev. analyt. Chem.	CRC Critical Reviews of Analytical Chemistry [*Eng.*]
C. r. hebd. Seanc. Acad. Sci., Paris	Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences [*Fr.*]
Croat. chem. Acta	Croatica Chemica Acta [*Eng., Ger.*]
Cslka Farm.	Ceskoslovenska Farmacie [*Czech, Slovak*]
Curr. Sci.	Current Science [*Eng.*]
CZ Chemie-Tech.	CZ Chemie-Technik [*Ger.*]
Dokl. Akad. Nauk SSSR	Doklady Akademii Nauk SSSR [*Russ.*]
Dokl. Akad. Nauk tadzhik. SSR	Doklady Akademii Nauk Tadzhikskoi SSR [*Russ.*]
Dokl. Akad. Nauk uzbek. SSR	Doklady Akademii Nauk Uzbekskoi SSR [*Russ.*]
Dt. ApothZtg	Deutsche Apotheker-Zeitung [*Ger.*]
Dt. LebensmittRdsch.	Deutsche Lebensmittel-Rundschau [*Ger.*]
Eczacilik Bult.	Eczacilik Bulteni [*Turk.*]
Environ. Sci. Technol.	Environmental Science & Technology [*Eng.*]
Erdoel Kohle Erdgas Petrochem. Brennst.-Chem.	Erdoel und Kohle, Erdgas, Petrochemie vereinigt mit Brennstoff-Chemie [*Ger.*]
Experientia	Experientia [*Eng., Ger.*]
Farmaceuticky Obz.	Farmaceuticky Obzor [*Czech, Slovak*]
Farmacia, Buc.	Farmacia [*Eng., Fr., Ger., Rom., Russ.*]
Farmacja pol.	Farmacja Polska [*Pol.*]
Farmaco, Ed. prat.	Farmaco, Edizione Pratica [*Fr., Ital.*]
Farmaco, Ed. scient.	Farmaco, Edizione Scientifica [*Eng., Ital.*]
Faserforsch. TextTech.	Faserforschung und Textiltechnik [*Ger.*]
Fette Seifen AnstrMittel	Fette, Seifen, Anstrichmittel [*Ger.*]
Fleischwirtschaft	Fleischwirtschaft [*Ger.*]
Geochim. cosmochim. Acta	Geochimica et Cosmochimica Acta [*Eng.*]
G-I-T Fachz. Lab.	Glas-Instrumenten-Technik. Fachzeitschrift fuer das Laboratorium [*Eng., Ger.*]
Grasas Aceit.	Grasas y Aceites [*Span.*]
Helv. chim. Acta	Helvetica Chimica Acta [*Fr., Ger.*]
Herba pol.	Herba Polonica [*Pol.*]
Hoppe-Seyler's Z. physiol. Chem.	Hoppe-Seyler's Zeitschrift fuer physiologische Chemie [*Ger.*]
Huaxue Tongbao [*Chemy Bull.*]	Huaxue Tongbao [*Chin.*]
Hutn. Listy	Hutnicke Listy [*Czech*]
Indian J. appl. Chem.	Indian Journal of Applied Chemistry [*Eng.*]
Indian J. Chem.	Indian Journal of Chemistry [*Eng.*]
Indian J. Pharm.	Indian Journal of Pharmacy [*Eng.*]
Indian J. Technol.	Indian Journal of Technology [*Eng.*]
Inds aliment. agric.	Industries Alimentaires et Agricoles [*Fr.*]
Industrie agr.	Industrie Agrarie [*Ital.*]
Infcion Quim. analit. pura apl. Ind.	Informacion de Quimica Analitica, Pura y Aplicada a la Industria [*Span.*]
Int. J. appl. Radiat. Isotopes	International Journal of Applied Radiation and Isotopes [*Eng., Fr., Ger.*]
Int. J. environ. analyt. Chem.	International Journal of Environmental Analytical Chemistry [*Eng.*]
Int. Sug. J.	International Sugar Journal [*Eng.*]
Isotopenpraxis	Isotopenpraxis [*Ger.*]
Israel J. Chem.	Israel Journal of Chemistry [*Eng.*]
Izv. Akad. Nauk beloruss. SSR, Ser. khim. Nauk	Izvestiya Akademii Nauk Belorusskoi SSR, Seriya Khimicheskikh Nauk [*Russ.*]
Izv. Akad. Nauk kazakh. SSR, Ser. khim.	Izvestiya Akademii Nauk Kazakhskoi SSR, Seriya Khimicheskaya [*Russ.*]
Izv. Akad. Nauk latv. SSR, Ser. khim.	Izvestiya Akademii Nauk Latviiskoi SSR, Seriya Khimicheskaya [*Russ.*]

Izv. Akad. Nauk SSSR, Ser. khim.	Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya [*Russ.*]
Izv. sib. Otdel. Akad. Nauk SSSR	Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR [*Russ.*]
Izv. tomsk. politekh. Inst.	Izvestiya Tomskogo Politekhnicheskogo Instituta imen S. M. Kirova [*Russ.*]
Izv. vyssh. ucheb. Zaved., Khim. khim. Tekhnol.	Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimi cheskaya Tekhnologiya [*Russ.*]
J. agric. Fd Chem.	Journal of Agricultural and Food Chemistry [*Eng.*]
J. Air Pollut. Control Ass.	Journal of the Air Pollution Control Association [*Eng.*]
J. Am. Oil Chem. Soc.	Journal of the American Oil Chemists' Society [*Eng.*]
Japan Analyst	Japan Analyst [*Jap.*]
J. appl. Chem. Biotechnol.	Journal of Applied Chemistry and Biotechnology [*Eng.*]
J. appl. Polym. Sci.	Journal of Applied Polymer Science [*Eng.*]
J. Ass. off. analyt. Chem.	Journal of the Association of Official Analytical Chemist [*Eng.*]
J. Ass. publ. Analysts	Journal of the Association of Public Analysts [*Eng.*]
J. chem. Soc., Dalton Trans.	Journal of the Chemical Society, Dalton Transactions [*Eng.*]
J. chem. Soc., Faraday Trans. I	Journal of the Chemical Society, Faraday Transactions I [*Eng.*
J. chem. Soc., Perkin Trans. I	Journal of the Chemical Society, Perkin Transactions I [*Eng.*
J. chem. Soc., Perkin Trans. II	Journal of the Chemical Society, Perkin Transactions II [*Eng.*
J. Chin. chem. Soc., Taipei	Journal of the Chinese Chemical Society [Taipei] [*Eng.*]
J. Chromat.	Journal of Chromatography [*Eng., Fr., Ger.*]
J. chromat. Sci.	Journal of Chromatographic Science [*Eng.*]
J. Dairy Sci.	Journal of Dairy Science [*Eng.*]
J. electroanalyt. Chem.	Journal of Electroanalytical Chemistry and Interfacial Electro chemistry [*Eng., Fr., Ger.*]
J. electrochem. Soc.	Journal of the Electrochemical Society [New York] [*Eng.*]
J. forens. Sci. Soc.	Journal of the Forensic Science Society, U.K. [*Eng.*]
J. Indian chem. Soc.	Journal of the Indian Chemical Society [*Eng.*]
J. inorg. nucl. Chem.	Journal of Inorganic & Nuclear Chemistry [*Eng.*]
J. Inst. Brew.	Journal of the Institute of Brewing [*Eng.*]
J. Inst. Petrol.	Journal of the Institute of Petroleum [*Eng.*]
J. Lipid Res.	Journal of Lipid Research [*Eng.*]
J. Paint Technol.	Journal of Paint Technology [*Eng.*]
J. Pharm. Belg.	Journal de Pharmacie de Belgique [*Fr.*]
J. Pharm. Pharmac.	Journal of Pharmacy and Pharmacology [*Eng.*]
J. pharm. Sci.	Journal of Pharmaceutical Sciences [*Eng.*]
J. Phys. D, appl. Phys.	Journal of Physics D, Applied Physics [*Eng., Fr., Ger.*]
J. Phys. E, scient. Instrum.	Journal of Physics E, Scientific Instruments [*Eng., Fr., Ger.*]
J. radioanalyt. Chem.	Journal of Radioanalytical Chemistry [*Eng., Fr., Ger.*]
J. Res. natn. Bur. Stand.	Journal of Research of the National Bureau of Standard [*Eng.*]
J. Sci. Fd Agric.	Journal of the Science of Food and Agriculture [*Eng*].
J. Steroid Biochem.	Journal of Steroid Biochemistry [*Eng.*]
J. Wat. Pollut. Control Fed.	Journal of the Water Pollution Control Federation [*Eng.*]
Kautschuk Gummi Kunststoffe	Kautschuk und Gummi, Kunststoffe [*Ger.*]
Klin. Wschr.	Klinische Wochenschrift [*Ger.*]
Kunststoffe	Kunststoffe [*Ger.*]
Lab. Pract.	Laboratory Practice [*Eng.*]
Lancet	Lancet [*Eng.*]
Lipids	Lipids [*Eng.*]
Magy. Kem. Foly.	Magyar Kemiai Folyoirat [*Hung.*]
Magy. Kem. Lap.	Magyar Kemikusok Lapja [*Hung.*]
Medicine Sci. Law	Medicine, Science and the Law [*Eng.*]
Med. Lab. Technol.	Medical Laboratory Technology [*Eng.*]
Metallurgia ital.	Metallurgia Italiana [*Ital.*]
Metallurgia Metal Form.	Metallurgia and Metal Forming (*formerly* Metallurgia Manchester) [*Eng.*]
Microchem. J.	Microchemical Journal [*Eng.*]
Mikrochim. Acta	Mikrochimica Acta [*Eng., Fr., Ger.*]
Mitt. Geb. Lebensmittelunters. u. Hyg.	Mitteilungen aus dem Gebiete der Lebensmitteluntersuchun und Hygiene [*Ger.*]
Mschr. Brau.	Monatsschrift fuer Brauerei [*Ger.*]
Nahrung	Nahrung [*Eng., Ger., Russ.*]
Nature, Lond.	Nature [*Eng.*]
Naturwissenschaften	Naturwissenschaften [*Eng., Ger.*]
Nauch. Trudy tashkent. Univ.	Nauchnye Trudy Tashkentskogo Universitet [*Russ.*]
Nucl. Instrum. Meth.	Nuclear Instruments and Methods [*Eng.*]
Nucl. Technol.	Nuclear Technology [*Eng.*]

Periodica polytech. chem. Engng	Periodica Polytechnica, Chemical Engineering [*Eng., Ger.*]
Pestic. Sci.	Pesticide Science [*Eng.*]
Pharm. Acta Helv.	Pharmaceutica Acta Helvetiae [*Eng., Fr., Ger.*]
Pharmazie	Pharmazie [*Ger.*]
Pharm. J.	Pharmaceutical Journal [*Eng.*]
Pharm. Weekbl. Ned.	Pharmaceutisch Weekblad voor Nederland [*Dutch, Eng., Ger.*]
Plaste Kautsch.	Plaste und Kautschuk [*Ger.*]
Polimery	Polimery [*Pol.*]
Pol. J. Pharmac. Pharm.	Polish Journal of Pharmacology and Pharmacy (*formerly* Dissertationes Pharmaceuticae et Pharmacologicae) [*Eng.*]
Powder Technol.	Powder Technology [*Eng.*]
Proc. Soc. analyt. Chem.	Proceedings of the Society for Analytical Chemistry [*Eng.*]
Prof. Pap. U.S. geol. Surv.	Professional Papers. United States Geological Survey [*Eng.*]
Pure appl. Chem.	Pure and Applied Chemistry [*Eng., Fr., Ger.*]
Pyrethrum Post	Pyrethrum Post [*Eng., Fr.*]
Radiochem. radioanalyt. Lett.	Radiochemical and Radioanalytical Letters [*Eng.*]
Radiochim. Acta	Radiochimica Acta [*Eng., Fr., Ger.*]
Rapp. CEA	Rapport. Commissariat a l'Energie Atomique [*Fr.*]
Rep. atom. Energy Commn U.S.	Report. Atomic Energy Commission, United States [*Eng.*]
Rep. Invest. U.S. Bur. Mines	Report of Investigations. United States Bureau of Mines [*Eng.*]
Rep. natn. Inst. Metall.	Report. National Institute for Metallurgy [*Eng.*]
Rep. U.K. atom. Energy Auth.	Report. United Kingdom Atomic Energy Authority [*Eng.*]
Rev. scient. Instrum.	Review of Scientific Instruments [*Eng.*]
Revta Asoc. bioquim. argent.	Revista de la Asociacion Bioquimica Argentina [*Span.*]
Revta Chim.	Revista de Chimie [*Rom.*]
Revue roum. Chim.	Revue Roumaine de Chimie [*Eng., Fr., Ger.*]
Riv. ital. Sostanze grasse	Rivista Italiana delle Sostanze Grasse [*Ital.*]
Roczn. Chem.	Roczniki Chemii [*Eng., Fr., Ger., Pol.*]
Roczn. panst. Zakl. Hig.	Roczniki Panstwowego Zakladu Higieny [*Pol.*]
Scand. J. clin. Lab. Invest.	Scandinavian Journal of Clinical & Laboratory Investigation [*Eng.*]
Science, N.Y.	Science [*Eng.*]
Scientia pharm.	Scientia Pharmaceutica [*Ger.*]
Sepn Sci.	Separation Science [*Eng.*]
Soviet Radiochem.	Soviet Radiochemistry [*English translation of* Radiokhimiya]
Spectrochim. Acta, A	Spectrochimica Acta, Part A [*Eng., Fr., Ger.*]
Spectrosc. Lett.	Spectroscopy Letters [*Eng.*]
Staerke	Staerke [*Eng., Ger.*]
Staub, Reinhalt. Luft	Staub, Reinhaltung der Luft [*Ger.*]
Steroids	Steroids [*Eng.*]
Studia Univ. Babes-Bolyai, Ser. Chem.	Studia Universitatis Babes-Bolyai, Series Chemia [*Rom.*]
Studii Cerc. Chim.	Studii si Cercetari de Chimie [*Rom.*]
Talanta	Talanta [*Eng., Fr., Ger.*]
TAPPI	TAPPI [Journal of the Technical Association of the Pulp and Paper Industry] [*Eng.*]
Trans. Instn Min. Metall.	Transactions of the Institution of Mining and Metallurgy [*Eng.*]
Trav. Soc. Pharm. Montpellier	Travaux de la Societe de Pharmacie de Montpellier [*Fr.*]
Trib. CEBEDEAU	Tribune de CEBEDEAU [Centre Belge d'Etude et de Documentation des Eaux] [*Fr.*]
Trudy Khim. khim. Tekhnol. [*Gor'kii*]	Trudy po Khimii i Khimicheskoi Tekhnologii [*Russ.*]
Trudy mosk. khim.-tekhnol. Inst.	Trudy Moskovskogo Khimiko-Tekhnologicheskogo Instituta imeni D. I. Mendeleeva [*Russ.*]
Trudy vses. nauchno-issled. Inst. khim. Reakt.	Trudy Vsesoyuznogo Nauchno-issledovatel'skogo Instituta Khimicheskikh Reaktivov [*Russ.*]
Uchen. Zap. perm. gos. Univ.	Uchenye Zapiski Permskogo Gosudarstvennogo Universiteta imeni M. Gor'kogo [*Russ.*]
Ukr. khim. Zh.	Ukrains'kyi Khimichnyi Zhurnal [*Ukr.*]
Uzbek. khim. Zh.	Uzbekskii Khimicheskii Zhurnal [*Russ.*]
Vest. leningr. gos. Univ., Fiz., Khim.	Vestnik Leningradskogo Gosudarstvennogo Universiteta, Fizika, Khimiya [*Russ.*]
Vest. mosk. gos. Univ., Ser. Khim.	Vestnik Moskovskogo Gosudarstvennogo Universiteta, Seriya Khimiya [*Russ.*]
Wat. Res.	Water Research [*Eng.*]
Wat. Sewage Wks	Water & Sewage Works [*Eng.*]
X-Ray Spectrom.	X-Ray Spectrometry [*Eng.*]

Z. analyt. Chem.	Zeitschrift fuer analytische Chemie [*Eng., Ger.*]
Z. anorg. allg. Chem.	Zeitschrift fuer anorganische und allgemeine Chemie [*Ger.*]
Zav. Lab.	Zavodskaya Laboratoriya [*Russ.*]
Z. Chemie, Lpz.	Zeitschrift fuer Chemie [*Ger.*]
Zentbl. Pharm., Pharmakother. u. Lab.-diagnostik	Zentralblatt fuer Pharmazie, Pharmakotherapie und Laboratoriums-diagnostik [*Ger.*]
Zh. analit. Khim.	Zhurnal Analiticheskoi Khimii [*Russ.*]
Zh. prikl. Khim., Leningr.	Zhurnal Prikladnoi Khimii [*Russ.*]
Zh. prikl. Spektrosk.	Zhurnal Prikladnoi Spektroskopii [*Russ.*]
Z. klin. Chem. klin. Biochem.	Zeitschrift fuer klinische Chemie und klinische Biochemie [*Eng., Ger.*]
Z. Lebensmittelunters. u. -Forsch.	Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung [*Eng., Ger.*]

ACKNOWLEDGEMENTS

The organisations publishing the following journals, or their own abstracts, are thanked for allowing reproduction of some abstracts.

Abstract Bulletin of the Institute of Paper Chemistry
Chemical Abstracts
Euro Abstracts
Flour Milling and Baking Research Association Abstracts
Food RA Abstracts
Fuel Abstracts and Current Titles
International Sugar Journal
Journal of the Institute of Brewing
Lead Abstracts
Mineralogical Abstracts
Nuclear Science Abstracts
Nutrition Abstracts and Reviews
Particulate Information
RAPRA Abstracts
Referativnyi Zhurnal, Khimiya, Section 19GD
Water Pollution Abstracts
World Surface Coatings Abstracts
World Textile Abstracts
Zinc Abstracts

ERRATA

Some errata subsequently published in the journals abstracted are included in the following list. When the initials of given names in the Author Index and in the abstracts do not agree, the Index should be assumed to be correct.

VOL. 18, 1970

Abstract No.	*Line*	
3012	7	*for* (C.I. Basic Green 5) *read* (C.I. Basic Blue 20)

The appropriate modification should be made to the Subject Index for Vol. 18.

VOL. 19, 1970

Abstract No.	*Line*	
2947	7, 8	*for* 2-[3-(1-methyl-2-piperidyl)-2-pyridylazo]-*p*-cresol *read* 2-[5-(1-methyl-2-piperidyl)-2-pyridylazo]-*p*-cresol

The appropriate modification should be made to the Subject Index for Vol. 19.

VOL. 20, 1971

Abstract No.	*Line*	
3665	8	*for* (C.I. Basic Green 5) *read* (C.I. Basic Blue 20)

The appropriate modification should be made to the Subject Index for Vol. 20.

VOL. 21, 1971

Abstract No.	*Line*	
156	16	*for* (C.I. Basic Green 5) *read* (C.I. Basic Blue 20)

The appropriate modification should be made to the Subject Index for Vol. 21.

VOL. 22, 1972

Abstract No.	*Line*	
4349	1, 2	*for* **chromatography and electrophoresis of** *read* **chromatography, electrophoresis and**
4449	1	*for* **(C.I. Basic Green 5)** *read* **(C.I. Basic Blue 20)**

The appropriate modifications should be made to the Author and Subject Indexes for Vol. 22.

VOL. 23, 1972

Abstract No.	*Line*	
4276	2, 3	*for* **chromatography and electrophoresis of** *read* **chromatography, electrophoresis and**
4580	2, 3	*for* **[C.I. Basic Green 5]** *read* **[C.I. Basic Blue 20]**

The appropriate modifications should be made to the Author and Subject Indexes for Vol. 23.

VOL. 24, 1973

Abstract No.	*Line*	
2107 2776	1 2	*for* [**C.I. Basic Green 5**] *read* [**C.I. Basic Blue 20**]

The appropriate modifications should be made to the Subject Index for Vol. 24.

VOL. 25, 1973

Abstract No.	*Line*	
74	2	*for* [**C.I. Basic Green 5**] *read* [**C.I. Basic Blue 20**]
153	8, 9	*for* (C.I. Basic Green 5) *read* (C.I. Basic Blue 20)

The appropriate modifications should be made to the Subject Index for Vol. 25.

VOL. 26, 1974

Abstract No.	*Line*	
874	2, 3	*for* 2-[3-(1-methyl-2-piperidyl)-2-pyridylazo]-*p*-cresol *read* 2-[5-(1-methyl-2-piperidyl)-2-pyridylazo]-*p*-cresol

The appropriate modifications should be made to the Subject Index for Vol. 26.

VOL. 27, 1974

Abstract No.	*Line*	
3	23	*for* Booker, W. B.; *read* Booher, W. B.
45	9	*for* BF_4^- methylene blue (**I**) - *read* methylene blue (**I**) - BF_4^-
58	8	*delete* ; *after* (**II**)
58	9	*delete*) *after* **II**
81	20	*delete*) *after* polystyrene
357	18	*delete* in acetone
357	19	*insert* in acetone *after* ether
480	9	*for* KMnO *read* $KMnO_4$
762	5	*insert* [*before* such
1107	6	*for* pentyl- or heptylamine *read* pentyl- or heptyl-amine
1148	2, 3	*for* Koten, Gerard van; *read* Van Koten, Gerard;
1203	24, 25	*for* van Meter, J. C.; *read* Van Meter, J. C.;
1204	17	*for* Rainey, W. T.; *read* Rainey, W. T., jun.;
1207	87	*for* **ooctyes** *read* **oocytes**
1226	6	*for* atoms fission-product *read* fission-product atoms
1332	26	*for* $S^2_2O_3^{2-}$ *read* $S_2O_3^{2-}$
1342	26	*for* 459 *read* 1452
1588	6	*for* Sickle Center, *read* Sickle Cell Center,
1594	3	*for* De Goeij, A. F. P. M. *read* Goeij, A. F. P. M. de
1880	229	*for* Kalpakian, A. M.; *read* Kalpakyan, A. M.
1887	12	*for* $(NH_4)S_2O_8$ *read* $(NH_4)_2S_2O_8$
1980	6	*for* 1973, *read* 1974,
2042	4	*for* Hoffman, Dietrich *read* Hoffmann, Dietrich
2091	1	*for* $\mathbf{F_2}$ *read* $\mathbf{F_{2\alpha}}$
2165	2	*for* Stanier, C. *read* Stainier, C.
2335	3	*for* Borba de Oliveira, D. *read* Oliveira, D. B. de
2519	25	*for* $SiOCl_6$ *read* Si_2OCl_6
2521	13	*for* 3105. *read* 3834.
2570	19	*for* Part II *read* Part IL
2612	5	*for* Ullmanova, H.; *read* Ullmannova, H.;
2639	1	*for* **2-phenylindan-** *read* **2-phenylindane-**
2639	2	*for* Zaul, L.; and Veis A., *read* Zauls, L.; and Veiss, A.
3031	1	*Insert* **Characterisation and properties of macro-molecules. VI.** *before* **Gel-permeation**
3144	14	*for* Sanchez-Pdreno, *read* Sanchez-Pedreno,
3225	8	*delete the comma after* Nb^V
3285	6	*for* (3), *read* (2),
3357	4	*for* El-sayed, Mahmoud A. *read* El-Sayed, Mahmoud A.
3387	2	*for* Lindstrom, K. *read* Linstroem, K.
3460	3	*for* Rainey, W. T. *read* Rainey, W. T., jun.
3536	19, 20, 21	*these lines should read* sition of the digitonide with hot dimethyl sulphoxide, extracting the soln. with hexane, evaporating the extract and dissolving the residue in tetrahydrofuran.
3537	15	*for* (2 : 1 : 7, *read* (2 : 1 : 7),
3642	14	*for* 5-amino-4-chloro- *read* 4-amino-5-chloro-

ABBREVIATIONS AND SYMBOLS

Certain abbreviations in everyday use are not included in the following list. When any doubt might arise from the use of an abbreviation or symbol the word is printed in full.

adenosine 5′-monophosphate	AMP
adenosine 5′-pyrophosphate	ADP
adenosine 5′-triphosphate	ATP
alternating current	a.c.
ampere	amp.
Ångström unit	Å
approximate, -ly	approx.
aqueous	aq.
boiling-point	b.p.
centimetre	cm
coefficient	coeff.
Colour Index (3rd Edition)	C.I.
concentrated	conc.
concentration	concn.
constant (as adjective)	const.
crystalline / crystallised	cryst.
curie	Ci
current density	c.d.
density, relative	*d*
deoxyribonucleic acid	DNA
diameter, inside	i.d.
diameter, outside	o.d.
differential thermal analysis	d.t.a.
dilute (as adjective)	dil.
5-dimethylaminonaphthalene-1-sulphonyl	dansyl
direct current	d.c.
electron spin resonance	e.s.r.
electron-volt	eV
equivalent	equiv.
ethylenediaminetetra-acetate	EDTA
gas - liquid chromatography	g.l.c.
gas - solid chromatography	g.s.c.
gram	g
gram-molecule	mole
half-wave potential	$E_{\frac{1}{2}}$
hertz	Hz
hour	hr.
infra-red	i.r.
insoluble	insol.
international unit	i.u.
ionic strength	I
kilogram	kg
kilovolt	kV
kilowatt	kW
mass spectrometry	m.s.
maxim-um, -a	max.
microgram	μg (not γ)
microlitre	μl
micrometre (not micron)	μm (not μ)
micromole	μmole
milliampere	mA
milli-equivalent	m-equiv.
milligram	mg
millilitre	ml
millimetre	mm
millimolar	mM
millivolt	mV
minute (time)	min.
molar (concentration)	M
molar extinction coefficient	ϵ
molecul-e, -ar	mol.
nanogram	ng
nanometre (not millimicron)	nm (not mμ)
nicotinamide–adenine dinucleotide (oxidised form)	NAD^+
nicotinamide–adenine dinucleotide (reduced form)	NADH
normal (concentration)	N
nuclear magnetic resonance	n.m.r.
ohm	Ω
optical rotation	α
parts per million	p.p.m.
per cent.	%
per cent. (vol. in vol.)	% (v/v)
per cent. (wt. in vol.)	% (w/v)
per cent. (wt. in wt.)	% (w/w)
poly(tetrafluoroethylene)	PTFE
potential difference	p.d.
precipitate (as a noun)	ppt.
precipitated	pptd.
precipitating	pptg.
precipitation	pptn.
preparation	prep.
recrystallised	recryst.
refractive index	n_λ^t
relative band speed	R_F
relative humidity	r.h.
revolutions per minute	r.p.m.
ribonucleic acid	RNA
saponification value	sap. val.
saturated (as adjective)	satd.
saturated calomel electrode	S.C.E.
second (time)	sec.
soluble	sol.
solution	soln.
specific rotation	$[\alpha]_\lambda^t$
square centimetre	sq. cm
standard temp. and pressure	s.t.p.
thin-layer chromatography	t.l.c.
ultra-violet	u.v.
unit of pressure (mm Hg)	torr
volt	V
volume	vol.
watt	W
wavelength	λ
weight	wt.

(*continued overleaf*)

ABBREVIATIONS AND SYMBOLS

(*continued from previous page*)

In addition to the symbols listed overleaf, the following may be used in conjunction with numerical values or in mathematical expressions—

greater than	$>$	of the order of, approximately	$\simeq$
less than	$<$	equivalent to	$\equiv$

Abbreviations of journal titles used in the abstracts are, in general, those of the 'World List of Scientific Periodicals' (4th edn, 1964, Butterworths, London), but all diacritical marks are omitted, and the German ä, ö and ü and the Scandinavian ø (or ö) are transliterated as ae, oe, ue and oe, respectively.

The language in which an original paper is written is English unless otherwise specified.

The chemical nomenclature used in the abstracts is that recommended by The Chemical Society ('Handbook for Chemical Society Authors,' The Chemical Society, London, 1961), and may differ from that used in the original articles.

When possible, drugs are specified by their official B.P. or B.P.C. names, or by the Approved Names recommended by the British Pharmacopoeia Commission (8 Bulstrode St., London, W1M 5FT).

The principal Pharmacopoeias are denoted by B.P., U.S.P., or D.A.B., together with the identifying roman numeral or year.

The names given to enzymes are those recommended by the International Union of Biochemistry ('Enzyme Nomenclature,' Elsevier Scientific Publishing Co., Amsterdam, 1973).

Pesticides are named in accordance with the British Standard 1831:1969, 'Recommended Common Names for Pesticides' (British Standards Institution, 2 Park St., London, W1A 2BS).

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Institut fuer Wasserwirtschaft. Ausgewaehlte Methoden der Wasseruntersuchung. Band I. Chemische, Physikalisch-chemische, Physikalische und Elektrochemische Methoden, 606B.
Instrumentation Laboratory Inc. Analytical systems, 213P. Electrode assemblies, 576P. Fluid analysis apparatus, 806P, 808P, 809P. Apparatus for calorimetry, 1199P.
Instrumentation Specialties Co. Apparatus for detecting the end of a chromatographical signal, 1126P.
International Atomic Energy Agency. Nuclear power plant control and instrumentation. 1973. Proceedings of Symposium, Prague, 1797B.
International Colour Association. Colour 73. Second Congress of the International Colour Association, York, 1973, 606B.
International Union of Pure and Applied Chemistry. High-energy photon activation: review, 2392. Recommendations for nomenclature of thermal analysis, 3860.
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